



# Surfa*Tech* Products for Personal Care 2014





SurfaTech Corporation is focused on providing unique innovative polymers for the personal care industry. We have accomplished this by employing a variety of polymer strategies. The accumulation of all these strategies has produced a method of engineering polymers to meet the precise demands of formulators worldwide. The resulting products are defined as “High Definition Polymers®”. These polymers utilize structure/function relationship to adjust the polymer’s performance. The use of the High Definition Polymer® concept allows us to modify: aesthetics, solubility, rheological properties, and performance (*film formation, UV boosting, etc.*).

### Multi Domain Polymers

“Multi Domain Polymers” are used to provide formulators with several unique raw materials that would meet their specific formulation needs. The term Multi-Domain Polymer is used to describe any polymer that incorporates at least two groups that vary in solubility and/or physical state. These polymers are typically separated into three groups.

#### 1. Solid/Liquid

These polymers are typically used for film formation and rheology modification in formulation. The use of solid and liquid alkyl pendent group, or domains, produce a film-forming polymer. These polymers have the cushion of a wax, the play time of an oil and provide a light feeling film. (*CosmoSurf® CE-140, CosmoSurf® CE-150, CosmoSurf® DDG-28*)

#### 2. Hydrophobic/Hydrophilic

This category of Multi-Domain polymers contains two different groups that differ insolubility (*Hydrophobic/Hydrophilic*) covalently bonded to each other. This produces a very organized system that does not have a critical micelle concentration (*CMC*). These polymers can be employed in dispersions, solubilization, or entrapment of actives. These polymers allow for oil phases to break out of emulsions or alcohol solutions into films rather than precipitate. (*Spider Ester® GEC, Spider Ester® ESO, Spider Ester® ABN*)

This group of polymers are also great solubilizers. They have the distinct ability to compatibilize non-polar actives when placed into a polar environment. This allows for a uniform dispersion of non-polar actives onto the skin from a variety of formulation chassis.

(*CosmoSurf® CE-100, CosmoSurf® DDG 20*)

#### 3. Silicone Hybrid Copolymers

These copolymers are a product of the copolymerization of a silicone polymer and a non-silicone. This produces a polymer that can either have a siliphilic moiety in the backbone and/or as a pendent group. By incorporating silicone into our polymer technology provides us the ability to: achieve the low surface tension associated with silicones (*low 20's*), produced a “green Silicone” (*polymers with the properties of a silicone but minimize the concentration of silicone*), and compatibilize with formulations. These Copolymers modify the aesthetics of oil phases at low concentrations.

(*CosmoSurf® DDGSi, CosmoSurf® DGSi, CosmoSurf® CE-100Si*)

		Sun-Care				Color Cosmetics			
Product Name	INCI Name	CAS	Description	Film Forming	Solubilizer	SPF Booster	Lip Sticks	Pressed Powder	Mascara
<b>CE Series</b>									
CosmoSurf® CE-100	Octyldodecyl Citrate Crosspolymer	1182066-69	Liquid		X		X		
CosmoSurf® CE-100Si	Octyldodecyl Bis-Hydroxypropyl Dimethicone Citrate Crosspolymer	Pending	Liquid		X		X		
CosmoSurf® CE-140	Stearyl/Octadodecyl Citrate Crosspolymer	1182065-17-3	Soft Solid	X			X	X	X
CosmoSurf® CE-150	Stearyl/Octadodecyl Citrate Crosspolymer	1182065-17-3	Solid	X			X	X	X
<b>DDG Series</b>									
CosmoSurf® DDG 20	Bis-Octyldodecyl Dimer Diinoleate/Propanediol Copolymer	1386383-61-4	Liquid	X			X		X
CosmoSurf® DDG 28	Bis-Dodecylhexyldecyl Dimer Diinoleate/Propanediol Copolymer	1386383-73-8	Liquid	X			X		X
CosmoSurf® DDGSi	Silicone Polyester 2 (Proposed)	Pending	Liquid	X			X		X
CosmoSurf® DGSi	Silicone Polyester 1 (Proposed)	Pending	Liquid	X			X		X
<b>Spider Esters</b>									
Spider Ester ESO	Sorbeth-2 Hexaoleate	155770-53-4	Liquid			X	X		
Spider Ester GEC	Glycereth-6 Tricocoate	67762-35-0	Liquid			X			X
Spider Ester ABN	Sorbeth-2/Oleate/Dimer Diinoleate Crosspolymer	Pending	Liquid	X			X		





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Spider Ester® are registered  
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